

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 10/13/09 has been entered.

Claim Objections

Claims 1-2 are objected to because of the following informalities:

As the claims are now directed to more one floorboard piece, the preamble of the claims should be amended to reflect a plurality of floorboard pieces.

Appropriate correction is required.

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 1-2 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one

skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

There is inadequate disclosure to support the tenon of the another floorboard passing the upper surface of the slot mortise **no less than** 1-2 mm without deflection as recited in the last four lines of the claim 1 (emphasis added). As claimed, the newly added subject matter includes dimensions 1-2 mm and above, which does not appear to be supported in the original disclosure. Page 5, lines 9-25 of the specification provides support only for the limited range of 1-2 mm. Further, there appears to be inadequate support for the lower surface of the slot mortise not deflecting when upper surface of the slot mortise overlaps the upper surface of the tenon.

Claims 1-2 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

With regard to claim 1: The limitation "the slot mortise" in lines 4-5, 7, 12, 16 and 18 of the claim lacks proper antecedent basis as slot mortises are present on both a short side and long side of the floor piece. The limitation "the tenon" in lines 6, 8, and 15 of the claim lacks proper antecedent basis as the tenons are present on both a short side and long side of the floor piece.

Further, the limitation "a tenon of the another floorboard overlaps the upper surface of the slot mortise" found in line 17-19 of the claim indefinite, it's unclear as to how the upper surface of the tenon overlaps the upper surface of the slot mortise.

Figure 2 of the instant application shows the upper surface of the slot mortise overlapping the upper surface of the tenon.

With regard to claim 2: The limitation "the slot mortise" in line 2 of the claim lacks proper antecedent basis as the slot mortises are present on both a short side and long side of the floor piece.

Claims 1-2 are examined as best understood.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-2 are rejected under 35 U.S.C. 103(a) as being unpatentable over Moriau et al. (US 6,490,836).

With regards to claim 1: Moriau et al. discloses a flat clasping floorboard piece (1) (figs. 22-23), which has an elongated strip shape; a slot mortise (10) being formed along one of the long sides of the floorboard piece, and a tenon (9) provided along the other long side; the short sides of the floor board piece being also provided with a slot mortise (10) and a tenon (9) (figs. 22-23). Note Moriau et al. discloses the slot mortises (10) and tenon (9) are applied along the long (longitudinal) sides of panel, in addition to the other two sides (short sides) (col. 3, lines 23-29).

Moriau et al. further discloses each slot mortise (10) having a short end side wall (M) and a long end side wall (N); the upper surface of each slot mortise (10) being parallel to and having the same height with an upper surface of the tenons (9); characterized in that a V-shaped groove (36) is provided in a lower surface of the slot mortises (10) and a corresponding convexity (33) is provided on a lower surface of the tenons (9); the convexity (33), in an insertion direction of the tenons (9), has an anti-self-locking oblique surface (76) formed on a front end thereof; the anti-self-locking oblique surface (76) forms a first angle with an upper surface of the floorboard strip (1); a corresponding oblique surface (83) is formed on an external surface on the long end of the lower side wall of each slot mortise (10) to engage with an anti-self-locking oblique surface (76) of another floorboard (figs. 23-25); a rear end of the convexity matches with an external side surface of the V-shaped groove (36) to form a self-locking surface, which forms a second angle with the upper surface of the strip; the second angle (A) ranges from 30-70°; and the external shape of the tenons (9) corresponds with the shape of the slot mortises (10) (fig. 23) (col. 10, lines 28-36).

Moriau et al. discloses the oblique surface (76) forms a first angle with the upper surface of the floorboard piece (1), but fails to disclose the first angle ranging from 15-35°.

However, Moriau et al. appears to disclose a first angle between 15-35°. Note the first angle is smaller to that of the second angle (A) which is disclosed to be in the range of 30-70°. Moriau et al. discloses the oblique surface (83) and corresponding

oblique surface (83) are angled to provide a smooth shifting of locking elements over one another (fig. 25) (col. 11, lines 39-48 and col. 12, lines 24-28).

Given the disclosure of Moriau et al., it would have been obvious matter of design choice to one of ordinary skill in the art at the time of the invention was made to have a first angle between 15-35° so as to provide a smooth shifting of locking elements over one another for ease of installation. No new or unpredictable results would be expected from having a first angle 15-35° as one of ordinary skill in the art would have discovered the optimum ranges through routine experimentation. The floorboard piece of Moriau et al., which discloses the general conditions and structure of the claimed floorboard would be expected similar manner to that of applicants.

Moriau et al. further discloses the upper surface of a tenon (9) of the another floorboard overlaps the upper surface of the slot mortise (10) a distance before the self-locking surface is formed as the floorboard piece (1) is attached horizontally relative to the another floorboard (fig. 25). Examiner submits the lower surface of the slot mortise of Moriau et al. would not be subject to deflection when the tenon approaches the slot mortise, however, the lower surface of the slot mortise would experience bending/deflection when the tenon is forced into the slot mortise.

Moriau et al. fails to disclose the distance is no less than 1-2 mm.

However, Moriau et al. does disclose the front extremity of the tenon (9) is shaped to extend into slot mortise so as to prevent the front extremity from pressing against the front side of the short end (M) of the slot mortise (col. 12, lines 5-15).

It would have obvious to one of ordinary skill in the art at the time of invention to optimize the distance of the tenon of the another floorboard to extend no less than 1-2mm without deflection of the lower surface of the slot mortise of the floorboard piece and before the self-locking surface is formed between the floorboard piece and the another floorboard in order to provide a flooring structure with a tenon end or front extremity that does press against the short end of the slot mortise of the floorboard for preventing damage of the floorboards during installation.

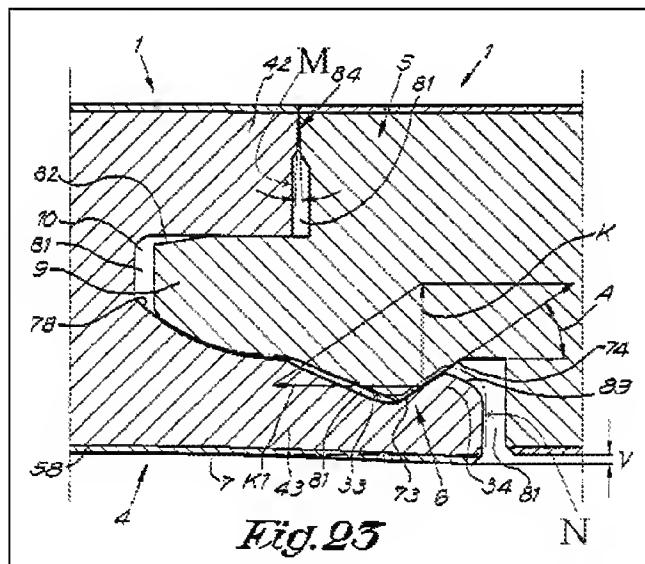


Fig. 23: Moriau et al. (US 6,490,836)

With regards to claim 2: Moriau et al. discloses everything previously mentioned, including the long end side wall of the slot mortise (10) being longer than the short end sidewall, but fails to disclose the long end side wall is 2-4mm longer than the short end wall.

However, it would have been an obvious matter of design choice to one of ordinary skill in the art at the time of the invention was made to discover the optimum or

workable ranges necessary to provide a floorboard structure that is stable and safe when joined to similar floorboard structures, no new or unpredictable results would be expected from such a configuration. The floorboard of Moriau et al. would be expected to perform equally well to that of applicant's.

Response to Arguments

Applicant's arguments filed 10/13/09 have been fully considered but they are not persuasive.

Applicant argues the first angle range of 15-30 degrees in combination with an overlap of the tenon and slot mortise of no less than 1-2 mm is not taught or suggested by Moriau et al.. Applicant submits the claimed combination provides a floor that is easy to manufacture, results in less excess floor material and avoids unnecessary damage to the tenon and slot mortise during assembly.

Examiner submits the floorboard piece of Moriau et al. performs in similar manner to applicant's claimed flooring, which includes the upper surface of the mortise overlapping the tenon before the self-locking is formed (fig. 23 and col. 12, lines 5-15).

In Gardner v. TEC Systems, Inc., 725 F.2d 1338, 220 USPQ 777 (Fed. Cir. 1984), cert. denied, 469 U.S. 830, 225 USPQ 232 (1984), the Federal Circuit held that, where the only difference between the prior art and the claims was a recitation of relative dimensions of the claimed device and a device having the claimed relative dimensions would not perform differently than the prior art device, the claimed device was not patentably distinct from the prior art device.

Absent new or unpredictable results, claims 1-2 remain rejection to Moriau et al. as being obvious.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to JESSIE FONSECA whose telephone number is (571)272-7195. The examiner can normally be reached on M-F 7:30am-4:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert Canfield can be reached on (571)272-6840. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/J. F./
Examiner, Art Unit 3633
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